

# TRAIL & Landscape

A PUBLICATION CONCERNED WITH  
NATURAL HISTORY AND CONSERVATION

*Dow's Swamp*



AH

---

## Trail & Landscape

### Editor

Anne Hanes

### Associate Editor

Joyce Reddoch

### Copy Editor

Sharon Godkin

### Production and Business Manager

Marc Forget

### Production Staff

Marjorie Bond

Barbara Campbell

Martha Camfield

Jennifer Chaundy

Gordon Colderwood

Eileen Evans

Helen Gilliatt

Mary Ann Gaudreau

Dorothy Greene

Randi Lockeberg

Yvon Loubert

Lloyd McDermot

Lisa Meyboom

Margaret Peacock

Richard Tait

Kay Thompson

Rosemary Wallbank

---

## The Ottawa Field ~ Naturalists' Club

— Founded 1879 —

### President

Dr. Roger Foxall, 587 Duff Crescent, Ottawa

### Corresponding Secretary

Ms. S. Armstrong (*address below*)

**Objectives of the Club:** To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring environments of high quality for living things.

**Club Publications:** THE CANADIAN FIELD-NATURALIST, devoted to publishing research in natural history; TRAIL & LANDSCAPE, a non-technical publication of general interest to local naturalists. THE SHRIKE, a local birding newsletter, is available by separate subscription.

**Field Trips, Lectures** and other natural history activities are arranged for local members. See "Coming Events" in this issue.

**Membership Fees:** Individual (yearly) \$10      Sustaining (yearly) \$25  
Family (yearly) \$12      Life (one payment) \$200

Subscription (libraries or other institutions) \$10 per year (Volume)

### Membership application, correspondence:

THE OTTAWA FIELD-NATURALISTS' CLUB  
Box 3264 Postal Station C  
Ottawa, Ontario K1Y 4J5

### Information:

Mrs. Elaine Dickson  
(613) 722-3050 day or evening;  
no calls before 10 a.m. please

---

Second Class Mail — Registration #2777

---

# TRAIL *& Landscape* ©

Vol 12 No 5

Published by

THE OTTAWA FIELD-NATURALISTS' CLUB  
Box 3264 Postal Station C  
Ottawa, Ontario K1Y 4J5

Editorial address: 18 Briarcliffe Drive, Ottawa K1J 6E4

Centennial Report	- - - - -	122
A Study of Owl Pellets	- - - - -	124
M. Foxall		
Birds in June, July and August	- - -	128
R. Gorman		
Plant Folklore	- - - - -	131
M. Forget		
Dow's Swamp	- - - - -	132
J. Reddoch		
Notes on the Christmas Bird Count	- -	142
G. McGee		
The Brobdingnagian Elm of Pontiac County		146
E. Mulligan		
Macoun What's What	- - - - -	148
W. McAllister		
Council Report	- - - - -	150
P. Hall		
Index to Volume Twelve	- - - -	152

OFNC Late Fall Program - inside back cover

## Centennial Report

Out-of-town members and all regular members -- please join us in celebrating The Ottawa Field-Naturalists' Club's Centennial Year in 1979.

### A WEEKEND OF CELEBRATIONS May 18 to 21

The focal point of Centennial celebrations will be a weekend of activities, as follows:

Friday Evening: 100 YEARS LOOKING AT NATURE, the Centennial exhibit, will be officially opened for members only, with a WINE AND CHEESE PARTY. It will continue to be on display at the Natural Museum of Natural Sciences (Victoria Memorial Museum) for six weeks. Also, a SPECIAL CLUB PIN will be presented to each of our honorary members. A similar pin, designed specifically for Centennial, will be available for purchase by all members.

Saturday Day: SEMINARS AND WORKSHOPS will cover a variety of topics for which information will be available in the coming months.

Saturday Evening: The CENTENNIAL BANQUET will be held at the Talisman Motor Hotel at which we hope to feature some truly Canadian dishes. There will also be a speaker and displays, including works by Club artists and our Macoun Field Club.

Sunday and Monday: OUTINGS and FIELD TRIPS are planned, some of which will be oriented to fit in with the seminars of Saturday.

All members will receive registration details at a later date. We plan to provide accommodation assistance to out-of-town members who wish it. Ottawa members who are interested in offering accommodation please contact Ellaine Dickson at 722-3050.

### Other Centennial Activities

A GIANT CLUB PICNIC will be held on September 16 after a day of field trips. The buses will then take participants to the picnic site in Gatineau Park.

A NATURE TRAIL built by the Macoun Field Club will be opening in the vicinity of the Macoun Club Study Area.

Centennial Year will also be celebrated with the production of a variety of projects.

**CENTENNIAL CALENDAR** You will receive this gift of the Club with or shortly after this issue of T&L. We are sure you will be delighted with your fellow club members' artistic works which the calendar will contain, as well as being your guide to Centennial events. See note on page 151.

**January:** We expect to have a STEREO RECORD of nature sounds of the Ottawa area available at this time. The high quality equipment used by Monty Brigham for the recording will assure outstanding results. **HASTY NOTES**, featuring a Great Horned Owl, designed by Ellaine Dickson, will also be available for sale.

**Early Spring:** **BIRDS OF THE OTTAWA DISTRICT**, an updated checklist in revised form, will be available. It will provide information on the abundance of each species in the form of a bar graph; this is the work of Bruce Barrett and the Bird Records Committee.

**Mid Summer:** **INDEX to "The Ottawa Naturalist" and the "Transactions of The Ottawa Field-Naturalists' Club"** is expected to be available for purchase about July. This important work will provide a detailed, annotated index to the forerunners of "The Canadian Field-Naturalist" and will cover 40 years of publications.

**Later in 1979:** **ORCHIDS IN THE OTTAWA DISTRICT**, we are pleased to announce, will be ready for publication by this time. This book will describe each species found in the District and will include details on abundance, habitat and distribution. It will be based on data collected by the Club's Orchid Location Survey. Allan Reddoch and Joyce Reddoch are writing the book and Anne Hanes is illustrating it.

At the present time Council has been unable to reach a decision on the republication of the autobiography of John Macoun, but this project is still under consideration. Also being considered is a proposal to publish a booklet entitled "Birds in the Ottawa Area, 1979". This report, should it be approved, would not appear until 1980.

We are looking forward to seeing members of The Ottawa Field-Naturalists' Club, from far and near, gathering in Centennial Year to enjoy the celebrations and the achievements of fellow members.

The Council



During winter walks, my father had often shown me pellets under the roosting trees of owls, and had opened them to show me the skulls and small bones of the owls' prey. When the time came to choose a project for the Henry Munro School Science Fair, a study of owl pellets seemed most appropriate.

As owls are mostly nocturnal, it is difficult to observe their feeding habits and the prey they kill. Therefore most studies of owl prey are based on analysis of bones found in pellets. For example, two articles in the April-June, 1978, issue of *The Canadian Field-Naturalist* described the food habits of the Barn Owl in British Columbia and of the Great Horned Owl in Alberta. In each case analysis of pellets was an important part of the study.

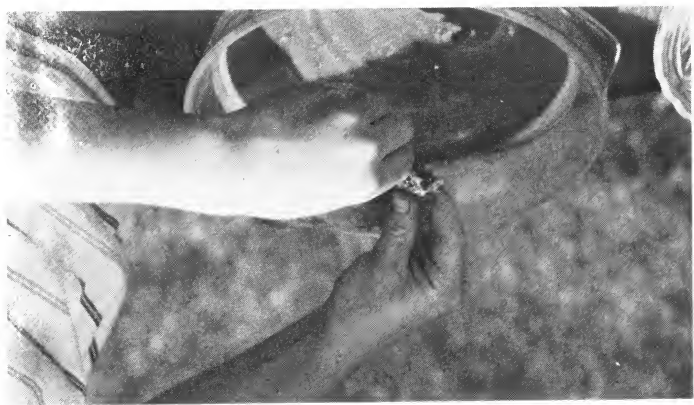
Most of my collecting was done in February and March, 1978. My father and I found the roosting tree of a Great Horned Owl near Ramsayville and we were told of a backyard near downtown Ottawa in which two Long-eared Owls were roosting. This was very fortunate as the Long-eared Owl is very difficult to find in Ottawa at any time of the year.

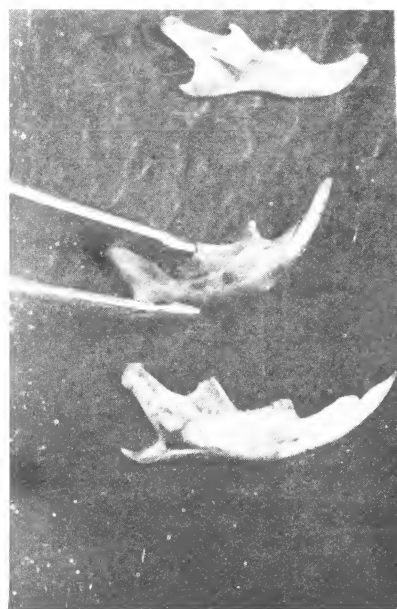
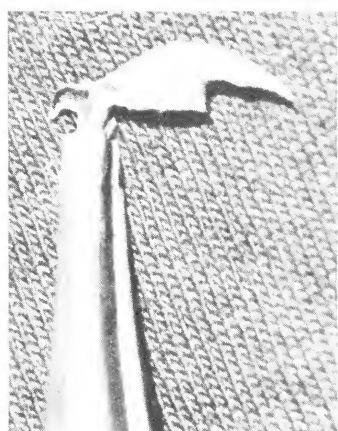
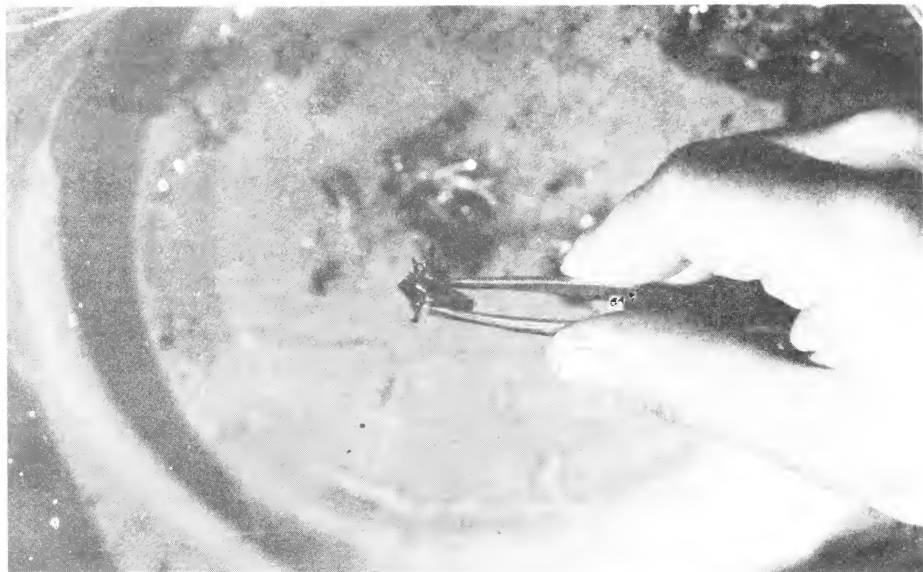
The pellets, mostly dug out of the snow, were first dried in the oven. Measurements of length and diameter were made on many of them. Each pellet was then soaked in a bowl of water, broken up gently and the floating fur removed. The bones were boiled to get them thoroughly clean, dried in the oven and then studied. Skulls and jawbones were used to identify the prey, which in almost all cases were meadow voles, *Microtus pennsylvanicus*.

For the Science Fair, I made up a display showing the entire contents, including fur, of one pellet each from a Great Horned Owl, a Long-eared Owl, a Short-eared Owl and a Snowy Owl. Using a diagram of a small mammal skeleton, I labelled many of the small bones.

#### Summary of Results

Long-eared Owl: Two Long-eared Owls spent the winter of 1977-78 near Main Street, roosting in two cedar trees in an urban backyard. About 40 pellets were collected during February, 1978.





Herbivorous

meadow vole Ja  
Herbivorous



The average size of a pellet was about 4.5 x 2.0 cm. The length varied between 3.5 and 5.0 cm. and the diameter varied between 1.5 and 2.5 cm.

A total of about 50 skulls were taken from the pellets. All but two were identified as the meadow vole. The two exceptions were much smaller and were identified as deer mice. In many cases the skulls of the meadow voles were complete; that is, the craniums had not been crushed.

The contents of 18 pellets were studied to find out how many mammals were in each. One contained no skulls, 13 contained one skull and 4 contained two skulls. Therefore, in most cases, the Long-eared Owl regurgitates a pellet containing the remains of one vole or mouse.

Great Horned Owl: Six complete pellets and many small fragments of pellets were collected during March, 1978, from under the roosting tree of a Great Horned Owl, located in a small wood near Ramsayville. The average diameter of the pellets was about 4 cm. All of the skulls were identified as meadow vole. However, 2 lower jawbones were from a shrew, as they were small and the teeth were different. The meadow vole is herbivorous and the teeth are designed for munching plants. The shrew is insectivorous and the teeth are designed for cutting the prey. No complete meadow vole skulls were found. In each case, the cranium had been crushed during digestion.

Short-eared Owl: Four pellets were collected by Rick Poulin during the summer of 1977 from the field on Leitrim Road near Limebank Road, where Short-eared Owls have been regular. Two of the pellets contained parts of a Robin. One contained the complete head of a Robin. Another contained a leg and foot, and feathers and small bones.

Snowy Owl: One pellet was found on Fallowfield Road under a tree used frequently by a Snowy Owl during the winter of 1976-77. It contained several large bones of a snowshoe hare.

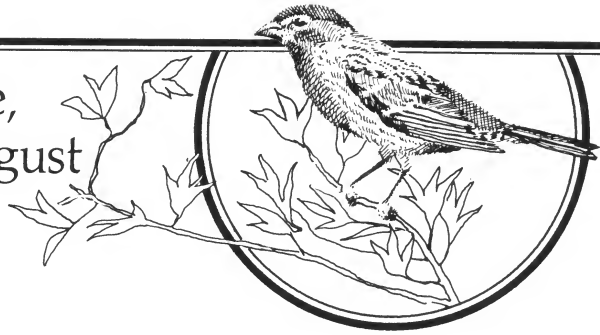
Hawk Owl: Two skulls of meadow voles were found under one of the trees used frequently by the Hawk Owl that spent the winter of 1976-77 near Chelsea.

### Conclusion

The results of the study show that, during the winter months, the most common prey of the Long-eared and Great Horned Owls in Ottawa is the meadow vole. The only other prey found was deer mouse and shrew. Pellets of Short-eared Owl (containing parts of a Robin) and Snowy Owl (containing bones of a snowshoe hare) were also studied but not enough were found to reach conclusions on feeding habits. Skulls of a meadow vole were found under a roosting tree of a Hawk Owl.

(Michael's project won the Grade 7 prize and was judged best overall from grades 7 and 8.)

# Birds in June, July and August



Bob Gorman

Once again, the beginning to middle of June proved to be one of the best times of the year for birding in Ottawa. To start off the month, there were a few rarities left over from May. One of these was the group of four Henslow's Sparrows at Ramsayville. The occurrence of these birds, especially four or more, spurred high hopes that they may have been the vanguard of a new colony for Ottawa, one long hoped for. But these hopes vanished as the field vegetation grew too tall to provide suitable habitat and the birds abandoned the area, being last reported on the 16th of June. It seems we will have to wait another year to see if Ottawa can regain the colonies of old.

Other stragglers from May were 2 Whistling Swans at Ottawa Beach and a spring-plumaged Red-throated Loon at Britannia. Both species lingered to the middle of the month.

The big hot spot for birding in the spring proved to be the Greens Creek sewage treatment ponds to the east of Ottawa. There, a flurry of rare bird sightings occurred. The wealth of rarities started off with a Great Egret on the 5th of June. This large white heron now seems to appear yearly in Ottawa. Whether this is due to a northward expansion of its range, or just better coverage of our area by birders, is hard to determine. This seems to have been an "egret spring" as three small egrets, most likely of the Cattle variety, also appeared. One showed up at Greens Creek on June 9th, and two had visited the Britannia Filtration Plant the day before. Unfortunately, none of the egrets reported remained to be observed by other birders.

The rare birds continued at Greens Creek with the occurrence of a Sandhill Crane on June 6th. All of the several records of this large and impressive bird have occurred in the last few years. Hopefully this trend will continue. The crane was followed by a Marbled Godwit on June 9th. This large shorebird, always an exciting bird to see, occurs rarely and sporadically in the Ottawa area. The rarities at Greens Creek were topped off by 2 Whimbrels on the 11th of June.

Greens Creek, however, was not the only place in Ottawa to spot rare birds in June, as the Ottawa River adjacent to the filtration plant at Britannia had its complement of rarities as well. Along with the Red-throated Loon and Cattle Egrets, Britannia also had the recurring Arctic Terns, now regulars for Ottawa in spring. The first was recorded on the 3rd of June, and the peak of 7 on the 14th. An adult Franklin's Gull accompanied the terns on the 3rd, but unfortunately did not remain.

The trials and tribulations of Ottawa birders were rewarded in June at Britannia as 4 often sought but rarely found jaegers appeared. The first, an adult Parasitic, arrived in the rain on June 13th. It churned all the gulls and terns, as well as the birders, into a panic. The very next day, June 14th, 3 Long-tailed Jaegers, long anticipated by Ottawa birders, appeared. It seemed only the birders got excited about these birds, as the gulls and terns flew right by the jaegers, unconcerned about their presence. Two of the Long-tailed Jaegers remained on the 15th, this time being in the same vicinity as the Parasitic, which had returned. This allowed several birders to get a good comparison between the two species, in both field marks and habits. An important difference between the two species was demonstrated as the Parasitic chased and disturbed the gulls greatly, while the Long-taileds never bothered the gulls.

The exciting migration was followed by a breeding season that was good in some ways but poor in others. The Yellow Rails in the Richmond Fen failed to be recorded at all in June due to high water. This is a reversal of previous years where up to 17 or 20 were reported. Other disappointments included a total lack of Mockingbird sightings. The cold snap in June caused many nest failures, especially among the insect-eating birds. The bad news is tempered somewhat by the good year Yellow-billed Cuckoos experienced in Ottawa. These voracious caterpillar-eaters were reported on both sides of the Ottawa River, including a successful nest in Chelsea. It was also a good year for the usually southern Willow Flycatcher with many more than the usual reported. Hopefully the cold weather didn't affect the breeding success of this bird.

There were a few unusual summer occurrences of non-breeding birds in July. On July 1st and 2nd, a Whistling Swan was seen at the Champlain Bridge, far from its Arctic breeding grounds. On the same date a spring-plumaged Red-necked Grebe, a stray from the western breeding grounds, was recorded. A Glossy Ibis which flew over Blackburn Hamlet on July 15th added to these oddities.

The beginning of the fall migration in July and August was largely uneventful. Shorebird and warbler numbers were generally down. There was a scattering of the usual Dowitchers and Stilt Sandpipers and Wilson's Phalaropes. Northern Phalaropes were conspicuous by their absence, with only a very few reports.

August brought sightings of an unusually high number of Whimbrel from the Shirley's Bay area, 7 or 10 reported in all. There were also several sightings of Knots, Baird's Sandpipers and Golden Plovers, the "looked for" shorebirds. The best shorebird reported for August was a Buff-breasted Sandpiper, found at Munster sewage lagoons on August 18th.

The highlight of August was the occurrence of a male and female House Finch on the ridge at Britannia, representing the second record for the Ottawa area. This small finch species was introduced into the New England states many years ago from western North America and has been expanding its range ever since. Hopefully, this sighting means that they may someday reach Ottawa permanently.

The month ended with a group of Lesser Scaup appearing at Shirley's Bay and an adult Bald Eagle in Leitrim on the 28th.

DON'T MISS THIS!

Exclusive international Christmas shopping  
at the second annual

## Wildlife Art Show

painting - carving - books

November 25: 10 a.m. - 10 p.m. November 26: 10 a.m. - 4 p.m.  
at the Nepean Sportsplex

presented by the Ottawa Duck Club



## Ideas Needed

Monty Brigham has put together for the Club a STEREO RECORD of sounds - birds, frogs, wind, rain, insects - celebrating Ottawa's natural environment. It's sure to be a hit!

The record needs a jacket, and a title. Your ideas for a name or a design are invited. Get in touch with Ellaine Dickson (722-3050) as soon as a brainwave strikes.

---

# Plant Folklore

by Marc Forget

Taxonomy is probably the greatest single tool naturalists employ for the purpose of communicating their observations. However, while the scientific community has been using a binomial system for naming, and in part describing, a specific plant, such a system has not been employed for common names. There are many examples of poor systems for naming plants (reflecting the inability of amateurs to get their act together!).

For instance, many plants produce leaves or flowers which are similar in appearance to those of totally unrelated plants. Such plants often acquire the same common names, a circumstance not particularly useful for the purpose of communicating information about the species involved. On the other hand, plants of very dissimilar appearance are also frequently categorized together. One particularly interesting grouping is that of plants used in the preparation of teas for facilitating parturition. Many plants were used by North American aborigines for that specific purpose, and hence the name "squaw-root" is applied to them. Not a bad idea; however, when one groups plants under names denoting usage, one can hardly expect to communicate knowledge on a species level.

The true, original squaw-root is *Conopholis americana* (L.)

It has been placed in the family Orobanchaceae, which has approximately 100 species. The plants in this family are usually parasitic on other plants, and normally squaw-root is found attached to the roots of red oak trees. (See "Squaw-root in the Ottawa-Hull District", T&L 8:1). Black cohosh *Cimicifuga racemosa* L. (Ranunculaceae), and blue cohosh, *Caulophyllum thalictroides* Michx. (Berberidaceae), also appear in the literature as squaw-root. Blue cohosh, in addition to parturifacient substances, contains large quantities of the very toxic surfactant glucoside, saponin. Ingestion of this substance can be fatal. Field identification of plants containing saponin is easy because of the characteristic foamy lather produced when they are crushed and rubbed. However, neither black cohosh nor blue cohosh are the true squaw-root. They acquired that name secondarily because they were also used by the aborigines in aiding parturition.

Two other plants, the partridge berry, *Mitchella repens* L. (Rubiaceae), and golden ragwort, *Senecio aureus* L. (Compositae), are also sometimes called squaw-berry and squaw-weed, respectively. These two plants have also appeared in the literature as squaw-root because of their application by aborigines in parturition. So far, I have listed five completely different plants that (for the most part) can be found in are area, and all share the same common name. To most people this is immaterial, but a word of warning to the many who experiment with wild edibles and remedies: make sure that the plant to be ingested is the correct one. It may be squaw-root and blue cohosh all at the same time!



# Dow's Swamp

Joyce Reddoch

While doing herbarium work on local orchids, I began to realize how many different species - and how many rare species - were collected from Dow's Swamp. James Fletcher's *Flora Ottawaensis* (1) and John Macoun's *The Cryptogamic Flora of Ottawa* (2) both contain many references to Dow's Swamp as the location of rare species. The swamp was clearly a favourite collecting ground for early Club members (3,4,5) and an important remnant of primaeval forest (6).

Where was Dow's Swamp, what was it like, and what happened to it? On the opposite page is one of the earliest aerial photographs taken in the Ottawa area (on June 6, 1925) (7). It shows that the swamp lay in the low trough which follows the Gloucester Fault (8) between Dow's Lake and the Rideau River, bounded on the west by the CPR track (curved line) and on the east by the old Bronson Avenue (now Bronson Place).

Pollen studies (9,10) have provided information on the age of the swamp. A core taken beside Bronson Avenue, just north of Sunnyside Avenue, revealed a layer of woody peat about 50 cm deep, above 600 cm of lake-bottom sediments on top of Champlain Sea clay. Correlations with other work suggest that the area of the swamp was covered by a lake from about 7,000 until about 3,000 years ago, when formation of bog and swamp forest began. The area seems to have become tree-covered about 1,000 to 1,500 years ago. Cedar, hemlock, elm and ash are well-represented in the pollen record of the peat.

The first historical description of Dow's Swamp came early because Colonel By had to build his canal across the swamp lowland. The problem was solved by Philemon Wright's dam and by another dam to the north which retained the water of the canal and the newly-created Dow's Lake. Colonel By Drive now crosses Philemon Wright's dam. (It should be noted that although the lowland forest which grew where Dow's Lake now lies was also composed of cedar, etc. (11), that forest grew in mineral soil, not in organic soil like Dow's Swamp (10).)

John MacTaggart, Colonel By's chief engineer, reported in 1829 that "the cedar-trees...grow as thickly in the swamp as they possibly can grow, and average fourteen inches thick, and seventy feet high" (12).







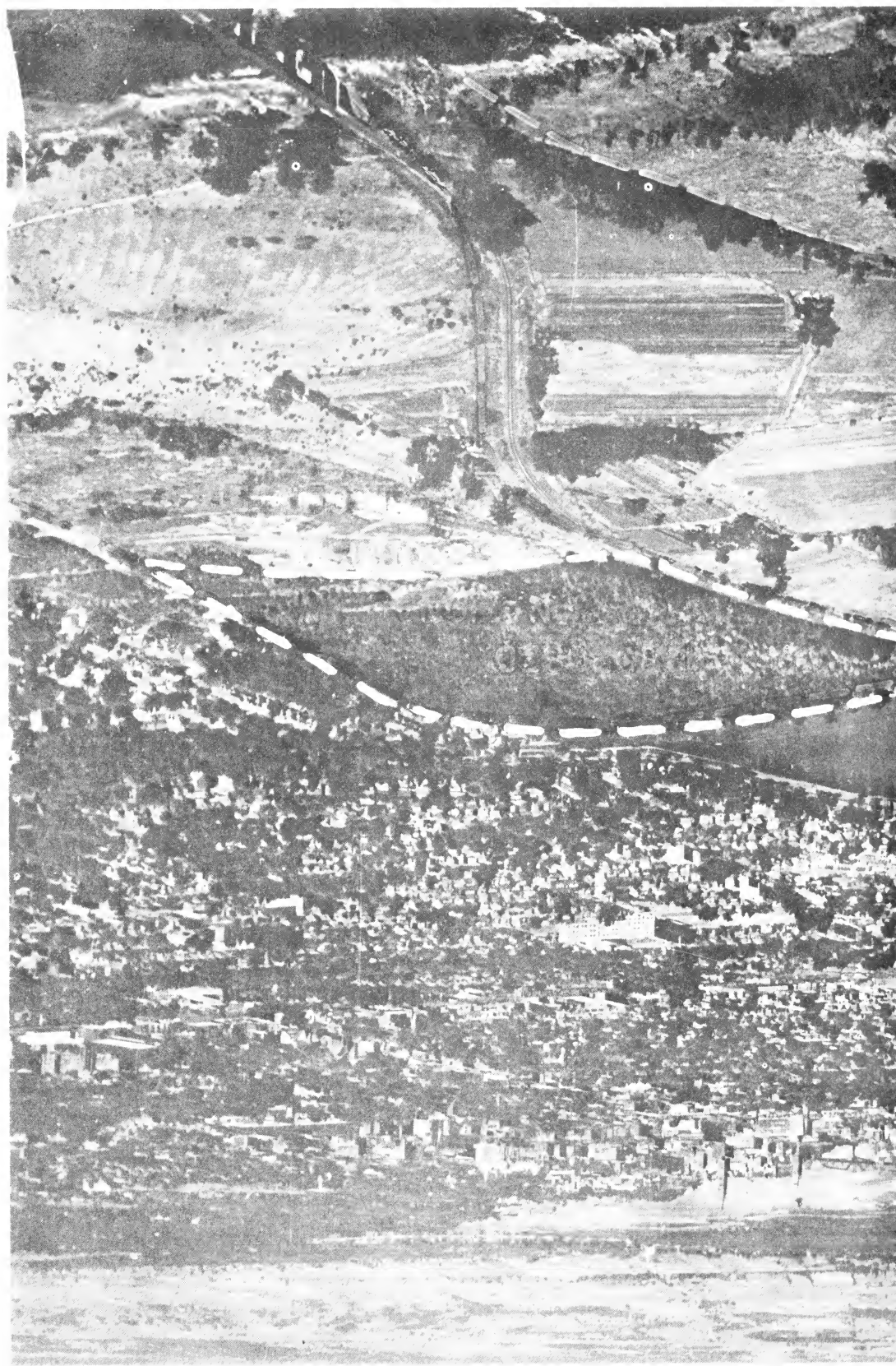
From John Macoun's 1897 description of moss habitats (2), one gets the picture of a cool, damp swamp of cedar, hemlock, black ash, birch, basswood, alder, young pine and balsam fir, with old, mossy stumps and fallen trees in various stages of decomposition, like the swamp shown opposite. There were water-filled holes and ponds, and a spring creek. An abundance of bog-Sphagnum mosses gives evidence for an open bog habitat. The bog must have encircled the small lake which is in the centre of the aerial photograph, opposite Sunnyside Avenue.

In the early days of the Club, members considered Dow's Swamp an "inexhaustible hunting ground" (3). Discoveries of orchids, in particular, were reported with enthusiasm - orchids like Ram's-head Lady-slipper (*Cypripedium arietinum*) which they found there "in great profusion". (Now, this species is regarded as rare in Canada and threatened in the United States (13).) In 1898 (4), the Club president, Mr. Prince, and John Macoun "struck out into the swamp to visit the small lake (the true Dow's Lake). *Caltha palustris* was conspicuous with its golden cups and rich green leaves. *Salix candida* too, with its striking crimson anthers, was much admired. Prof. Prince caught among other interesting denizens of the lake, the Mud Minnow." On another occasion (1), the rare butterfly, The Baltimore (*Euphydryas phaeton*) was noted "in an open glade to the southeast of the lake" near its food plant, turtlehead (*Chelone glabra*), which grew there in abundance.

By the 1930's, Dow's Swamp was no longer three miles out of town, but was being surrounded by the city and was suffering for it (14). It was still very dense, but perhaps the area was becoming wetter, because people I talked to remember most clearly the willows, alders, cattails and deep pools.

In the 1950's the Club held early morning bird walks every Tuesday in the spring to view migrating warblers from the elevated edge of Colonel By Drive. C.H.D. Clarke reported (15) that "...the Federal District (Commission, predecessor of the National Capital Commission) began to take an interest, and reports in the paper spoke about the place as a haunt of birds. One day a band of workmen went in and leveled all the trees and shrubs in a swath of one hundred feet across the swamp. (The Club decided to take action.) A delegation, led by the redoubtable Dr. Harrison F. Lewis, waited on the Commission, and gave them a long discourse on the swamp and all it meant... The discourse was interrupted by an impatient Federal District Chief, who protested 'But we're making the place into a bird sanctuary!'





"The work stopped, but whether there was ever official comprehension, I know not. Whenever did the man of the drawing board and the bulldozer leave a piece of land alone?"

In 1957, the new Bronson Avenue bridge was built over the canal, and the roadway was realigned a hundred metres or so westward. This encroachment onto Dow's Swamp killed the huge elms around the edge.

The *coup de grace* was administered by Carleton University when it built its access road from Bronson Avenue, thus damming the natural flow of drainage southward through the meadows to the Rideau River and killing the swamp by drowning it. So ended this precious fragment of primeval swamp, which, if properly managed, would have been a magnificent, accessible natural resource for the university and for city residents. Further indignities were heaped on the dead swamp each winter when the area was used as a snow dump.

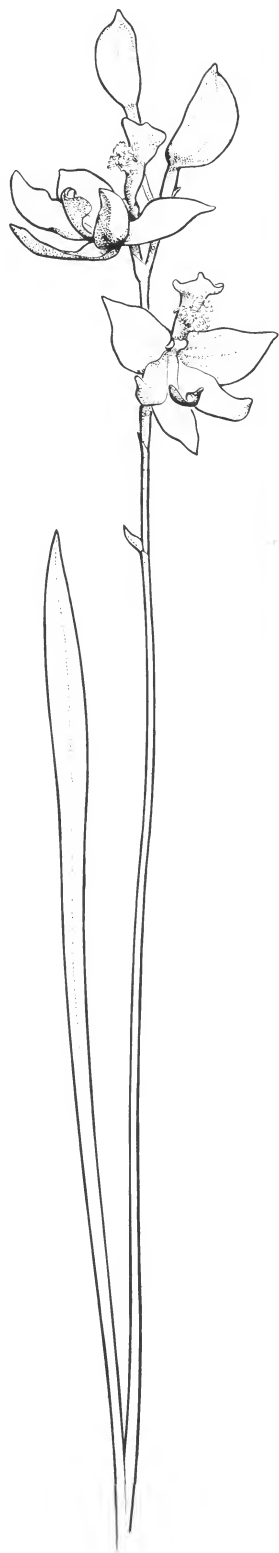
#### The Rare Plants of Dow's Swamp

Of all the rare plants which were found in Dow's Swamp, Round-leaved Orchid (*Amerorchis rotundifolia*) must be the rarest. At present we know of no location in the Ottawa District where this species still grows, although a few plants were seen about ten years ago in a small bog near Poltimore, Quebec. White Bog Orchid (*Platanthera dilatata*) is another Dow's Swamp species which is significant. At present we know it in the Ottawa District only from Poltimore and from the Long Swamp (17).

Grass-pink (*Calopogon tuberosus*), the orchid illustrated on the opposite page, was first collected in Dow's Swamp in 1860 by B. Billings (16), one of the earliest collections in the Ottawa District. Grass-pink is one of several species of vascular plants which confirm that there was an open fen-bog component to Dow's Swamp. Other species - all rare - collected from "Dow's Swamp" which must have come from the same habitat are Ridged Sedge (*Carex gymnocrates*), Mud Sedge (*C. limosa*), Slender Cotton-grass (*Eriophorum gracile*), Green Cotton-grass (*E. viridi-carinatum*), Rose Pogonia (*Pogonia ophioglossoides*), White Bog Orchid, Hoary Willow (*Salix candida*), Cuckoo-flower (*Cardamine pratense*), and Spatulate-leaved Sundew (*Drosera intermedia*).

On the previous pages is a post-Second World War view of Dow's Swamp (outlined) with the Rideau River in the foreground and the city in the background.

A number of species which must have been recorded from the cedar swamp habitat are now considered to be uncommon to rare in the Ottawa District: Prairie Sedge (*Carex prairea*), Three-leaved False Solomon's Seal (*Smilacina trifolia*), Round-leaved Orchid, Early Coralroot (*Corallorhiza trifida*), Ram's-head Lady-slipper, Small Yellow Lady-slipper (*Cypripedium calceolus* var. *parviflorum*), Showy Lady-slipper (*C. reginae*), Loesel's Twayblade (*Liparis loeselii*), White Adder's-mouth (*Malaxis monophyllos*), Green Adder's-mouth (*M. unifolia*), Northern Green Orchid (*Platanthera hyperborea*), Yellow Water-crowfoot (*Ranunculus flabellaris*), Purple Avens (*Geum rivale*), Kidney-leaved Violet (*Viola renifolia*), One-flowered Winter-green (*Moneses uniflora*), Pink Pyrola (*Pyrola asarifolia*), High Bush Blueberry (*Vaccinium corymbosum*), Dodder (*Cuscuta gronovii*), Purslane Speedwell (*Veronica peregrina*), Wild Honeysuckle (*Lonicera dioica*), Swamp Fly-honeysuckle (*Lonicera oblongifolia*), and Water Lobelia (*Lobelia dortmanna*).



A rare alien, Field Gromwell (*Lithospermum arvense*), was collected by the railway tracks, and Virginian Spring-beauty (*Claytonia virginica*) has been reported from "the outlet of Dow's Swamp" (5).

#### The Birds of Dow's Swamp

Although the swamp was not studied systematically, two new birds for the Ottawa District were first sighted there in 1954 by Eric Mills: Clay-coloured Sparrow and Carolina Wren (18). Earl Godfrey remembers the great chorus from roosting starlings which rose from the swamp late on sunny winter afternoons in the late forties. In earlier times, James Fletcher noted "numerous crows, some of which wintered in Dow's Swamp" (19).

The swamp and its summer birdlife were well described by C.H.D. Clarke (15)

"There among the cedars, willows, alders and elms, in tangled glades that

led over sodden ground to beds of cattails, were the white-throat and the veery. There the alder flycatcher luxuriated among the mosquitoes, and one could sort out the water-thrush from the mourning warbler by song, and the purple finch from the warbling vireo. There were enough tall trees on the side of the Bronson hill to hold a pair or two of scarlet tanagers, and enough water and cattails near the railway tracks for a colony of short-billed marsh wrens, and even, by times, a pair of black ducks.

"At various times I suspected the Lincoln sparrow, rusty blackbird, and ruby-crowned kinglet of nesting..."

### The Rare Frog of Dow's Swamp

Dow's Swamp is renowned as one of the few localities in the Ottawa District where the Pickerel Frog has been collected. This brown-coloured frog with rectangular markings is thought to prefer the margins of cool swamps, bogs and streams. In summer, it sometimes forages into meadows (20). In recent years, a few sight records have turned up, one at the same bog near Poltimore where the rarest Dow's Swamp orchid species were observed (21).

### The Mammals of Dow's Swamp

Again, no systematic study of the mammals was ever made, but two species have been collected: Red-backed Vole and Deermouse. Red-backed Voles are mostly animals of the boreal forest, but they are also found in various woodlots around Ottawa. The Deermouse, also a boreal forest dweller, is not nearly so common.

In the 1950's, Doug Savile watched a family of foxes growing up at the edge of the swamp.

Acknowledgements The following people were extremely helpful in providing me with information: Francis Cook, Charlotte Dill, Bill Dore, Albert Dugal, Earl Godfrey, Bob Ireland, Harold Minshall, Bob Mott, Doug Savile and Don Smith.

### References

1. Fletcher, J. The Ottawa Naturalist II(12): 1 (1889) and irregularly in subsequent issues
2. Macoun, J. The Ottawa Naturalist XI(7): 129 (1897)

and irregularly in subsequent issues

3. reports of excursions - Transactions of The Ottawa Field-Naturalists' Club 4: 71 (1883); The Ottawa Naturalist I(V): 79 (1887); *ibid* I(VIII): 113 (1887); *ibid* I(IX): 134 (1887); *ibid* XI(2): 35 (1897)
4. report of excursion - The Ottawa Naturalist XII(3): 61 (1898)
5. report of excursion - The Ottawa Naturalist XII(10): 188 (1899)
6. Billington, C. Trail & Landscape 12(4): 114 (1978)
7. Original photo supplied by the Survey and Mapping Branch, Department of Energy, Mines and Resources, frame number HA 27-17
8. Wilson, A.E. A Guide to the Geology of the Ottawa District, p. 25 (1956)
9. Mott, R.J. and M. Camfield Geological Survey of Canada, Bulletin 69-38 (1969)
10. Mott, R.J. personal communication
11. Walker, H. and O. Carleton Saga, p. xiv (1968)
12. MacTaggart, J. Three Years in Canada, etc. (1829) quoted in Legget, R. Rideau Waterway, p. 184 (1972)
13. Argus, G.W. and D. J. White The Rare Vascular Plants of Ontario, Syllogeus 14 (1977)
14. Minshall, W.H. personal communication, letter of February 7, 1978
15. Clarke, C.H.D. The Canadian Field-Naturalist 79(1): 1 (1965)
16. Billings, B., Jr. "Dow's Swamp 3 miles south of Ottawa", specimen 12563 at Queen's University (QK)
17. Reddoch, J.M. Trail & Landscape 12(1): 18 (1978)
18. Mills, E.L. The Canadian Field-Naturalist 71(3): 155 (1957)
19. Fletcher, J. The Ottawa Naturalist XVI(1): 13 (1902)
20. Cook, F.R. Trail & Landscape 2(2): 50 (1968)
21. Brunton, D.F. Trail & Landscape 7(2): 41 (1973)



---

# Notes on the Christmas Bird Count

George McGee

(At the December monthly meeting last year we enjoyed an evening of talk about the Christmas Bird Counts, past and present. Roger Foxall outlined the history of CBC's and spoke of the gains in knowledge obtained as a result of data gathered by the 1200 Counts taking place in North America yearly. Rick Poulin told us about the present system of operation, and some of the organizational problems of bringing in an accurate census. George McGee reminisced about his personal experiences as a participant and co-ordinator of the Ottawa counts over many years. Editor)

Towards the end of the nineteenth century the myth of inexhaustible abundance of wildlife and other natural resources rapidly gave way to a demand for conservation and management practices. Studies of wildlife populations and population trends to gain knowledge essential to management became the "in thing", at least in the case of the so-called economic species.

In the light of the interest of American birders in both the garden variety and economic species, the National Audubon Society of the USA proposed that member societies and others interested join in a simultaneous Christmas season "bird count" in their respective areas. A condition of participation was that counts were to be made in accordance with the Society rules, and results were to be sent to the National Office for analysis and publication. The first co-operative count took place about the turn of the century.

The first Ottawa Count was organized in 1919 by the late Hoyes Lloyd (author of *Birds of Ottawa*, 1944, and a stalwart supporter of the Club). A single party led by Mr. Lloyd toured the Rockcliffe area, coming up with a modest count. Modest or not, this initial Count was the start of an important and interesting participation of the Club in the co-operative search for better knowledge of our avifauna. Results of the Count were passed to the Audubon Society, and in addition were published until the mid-1960's, in the official Club journal, *The Canadian Field-Naturalist*.



As time went on it became apparent that the publication of census results in the CFN did not in itself provide quick access to the data collected over many count years. For example, it was necessary to review all previous volumes of the journal to ensure that the discovery of an exotic species on a count was in effect a first for the Ottawa area. To trace the comparative trends of abundance of a series of species became an endless task.

It fell to Gary and Anne Hanes to assess the need for an "easy to use" system and to do something about it. The Haneses devised a loose-leaf system which allowed space for a single sheet for each species and provided room for recording census observations from the past as well as for years to come. They also undertook the task of entering all past records, including a continuing summary of the essential weather data for count days. It is thus no longer necessary to use valuable space in our official journal to print census results. More importantly, interested amateurs and research scientists alike can readily obtain all available data on population trends in the Ottawa area through the Bird Records Committee.

(The work by the Haneses on the Census records was only one of the many services volunteered by these fine naturalists. Let us not forget the Spring Flower Survey, Trail & Landscape, etc.)

I inherited the chairmanship of the Census Committee from Gary Hanes in the early 1960's. At that time party leaders and their small circle of co-workers were pretty well married to their respective count areas. Rowley Frith at Rockcliffe, Earl Godfrey and Doug Savile in central Gatineau, John Crosby and Harry Bear in Gatineau West, Stu MacDonald in Gatineau East; Graham Cooch, Vic Solman, Ron Bedford, Fred Bourguignon, Clary Frankton, the Haneses and MacKenzies all in their own private domains.

I had managed to carve out a niche for myself and Bill Holland in the Alta Vista area plus a piece of Vincent Massey Park. As our efforts were largely devoted to checking feeders, the area provided an excellent training ground for members of my bird classes, as well as for many enthusiastic youngsters. At about the same time, many of the "old guard" found that with each succeeding year, the Count Day apparently got longer and the snow seemingly deeper. They too began to encourage the growing ranks of young birders to join their parties and, no doubt, do much of the leg work. Today the Christmas, and the more recently established spring and fall counts, are definitely youth oriented. The increases during the past decade in the numbers of participants, and the new species and total individuals recorded, is solid evidence of the advantage of encouraging beginners.

Up until the late 1960's it was the custom for party leaders to check the field count at home, calculate party hours,

miles travelled by car and afoot, and then phone their results to the compiler in the early evening. Entering the results phoned in by 12 leaders on a final sheet without error is no small job; eyeball adding the transcribed columns vertically and horizontally and coming up with the same totals can be a near nightmare. Thus the late John Bird often waited until the early hours of the following morning for final results to report in his bird column in the newspaper. The introduction of an adding machine, followed by the meeting of party leaders at a central depot to permit the transcribing of party lists species by species, made life easier for compilers.

One of the problems upon finding an unusual bird (a "first") on the census is to satisfy both the compiler and the Audubon Society that you could not possibly have been mistaken in the identification. In most cases, this means a confirming observer and the completion of a data sheet describing the circumstances under which the bird was seen, behaviour observed, weather and light conditions, visual aids used, etc. All of this reminds me of census "firsts" during my experience as a Compiler.

I recall a humorous side of the 1969 census. The day was bitterly cold and my Alta Vista party had only Vincent Massey Park to cover to complete the area. Mergansers, Mallards, a Goldeneye and a Brown Creeper were located, needing only a Black Duck to give us an all-time high for the area. Suddenly, beyond the edge of the snowbank overhanging the river just below Carleton University, movement of dark waterfowl was discerned. Scrambling to a better vantage point, we saw 4 Blacks, one of which seemed to submerge itself frequently in the shallow water. The desire to get back to shelter and hot coffee gave way to curiosity, so cold and all I unlimbered the scope to check the oddball behaviour of the partially submerging Black. Finally from under the bank a blackish bird appeared, obviously smaller than a Black, and turning its head it displayed a whitish bill -- a Coot! An all-time first for the census. My frantic hand signals brought departing members to the scope to confirm the find.

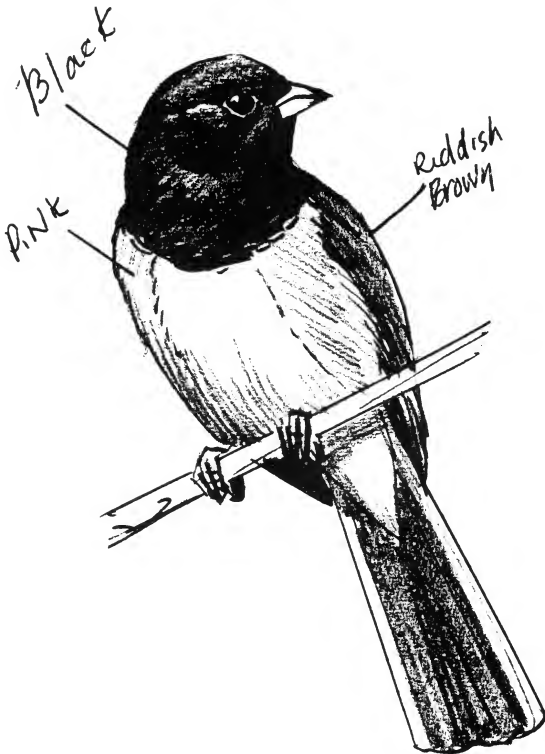
Referring to the thrills and problems of finding a rare bird recalls the 1965 census when John Crosby (wildlife artist and illustrator of *The Birds of Canada*) phoned in his census results, set out properly in checklist order: "Pine Siskin, 8; American Goldfinch, 2; Slate-coloured Junco, 3; Oregon Junco, 1; --" "Hold it, John", I said, "where in hell did you find that one?"

It seems John, working on his own in the depth of the Gatineau, was invited by a kindly lady to come in for a cup of tea. As he sipped the tea his eyes strayed to a window feeder, and to his amazement, there at the window was an Oregon Junco.

Our conversation that followed went something like this:

- G: That Oregon is a great find, an all-time first for the Count. As an unusual bird, however, you will have to send me a detailed description of field marks observed - light conditions, etc., etc.
- J: It was an Oregon Junco; I saw it myself.
- G: I know you can recognize an Oregon Junco, but we have to have details for the Audubon Society. Did anyone else see it?
- J: The lady of the house, but she's no ornithologist. She just feeds them.
- G: Where did you see it?
- J: Out the window.
- G: Out the window? How far away? Did you use binoculars or a scope?
- J: No - it was too close to focus, and I know an Oregon Junco!
- G: I know you know an Oregon Junco, but the Audubon Society doesn't - they wouldn't know you from Terry Shortt.
- J: OK, OK, I'll send you something.

The next day John sent the following proof, which satisfied the Audubon Society:



sketch by John Crosby



From Luskville, proceed west on Ch. de la Baie.  
The Big Elm can be seen from the bend in the road  
before it approaches the shore of Black Bay.

Photos by Joyce Reddoch; prints by Lloyd McDermot

---

# The Brobdingnagian Elm of Pontiac County

E.B.W. Mulligan

Last spring, accompanied by a forester, I went down to a spot near the shore of the Ottawa River at Black Bay to measure a colossal elm. This tree, which was here at the time of the Brobdingnagian forests early in the last century, measures over 18 feet in circumference at 3 feet from the ground, and 16 feet at 5 feet from the ground. It is about 90 feet high and is over 70 feet wide at the crown. The forester estimated that one could cut 50 cords of 16 inch stovewood from this elm.

I have found some historical information which helps to establish where and when this elm started growing. On June 5, 1610, Champlain and his explorers, accompanied by "coureurs de bois" and Indian guides, met a storm on Lake Deschenes halfway between Chaudière Falls and Chats Falls. The spring floods from the then rampant Ottawa River were in full swing. Accompanying the storm were strong westerly winds which pushed the 20 or so large canoes into Black Bay. They decided to wait out the storm on the bank of the river about  $\frac{1}{2}$  mile from the point which juts out into the river. They enjoyed some comfort here, as the strong winds had blown away all the black flies and mosquitoes which had been pestering them since they left Montreal.

On the spot where they set up their shelters was an elm tree that was then probably 50 years old. The tree divided into 3 sections about 15 feet above the ground. That tree became the giant that still lives despite the Dutch elm disease which is laying waste our beautiful elms.

I'm not sure if there is another elm in existence larger than this one, but I'm sure that if this elm were in the Niagara peninsula it would be fenced off and surrounded with historical plaques. In Pontiac we are looking for tourist attractions (or should be). I suggest that we record this extraordinary elm on future maps; and in any tourist brochures we make to promote historical attractions we should publicize "the tree that sheltered Champlain".



The Elm and Anne Hanes

# Macoun What's what.

Wendy McAllister

This summer has been a busy one for all Macoun members, so when we assembled for the 10-day canoe trip (August 26 to September 4) into Algonquin Park, we had much to discuss. Our past president, Gary Henson, worked all summer as an interpretive naturalist in Algonquin. Others participated in such programs as the Junior Rangers, Canada Conservation Corps, and Junior Conservationist Award Program. Some visited other countries, and others stayed in Ottawa to keep an eye on the Study Area.

A new year has started. Our first few meetings will feature talks by our members about their summer's experiences. Jean McAllister gave the first, a slide show about her family's trip to the Rocky Mountains. Bob Bracken also led an interesting walk in the Study Area to look at ferns and their allies. I was amazed that we found 34 species.

In reminiscence of our past year in Macoun, and to wish good luck to our, and your, new year, I would like to relive with you my favourite field trip of last year. It was not a preplanned trip -- a few of us just got together on a late April Saturday afternoon, and left for the Study Area by bus.

It was cloudy, windy and cold, but every once in awhile the sun peeked out at us for a brief but blissful second. We trudged slowly up the gravel road to the planted pines and stopped to listen to the chorus frogs calling in the temporary pond there. Jean and I separated from the group and continued to the top of the field where she had been studying groundhogs. We heard one whistle, and saw it standing by its hole. We moved up and I lay down a foot from its hole, camera in hand. Soon it came up and I was able to get quite a few reasonable pictures. It was quite a thrill to be that close to a wild animal and have it come closer and closer to satisfy its curiosity.

Soon my shutter finger grew cold, so I left Jean with her spotting scope, binoculars, two tripods, and notebook. I ran to warm myself and to catch up with the others. I joined the others at the bridge. After a short session of them trying to chase a reluctant water strider into my view finder, we continued on.

I soon realized that almost all of the now was gone, even from under the larger pines. There was much clicking of cameras, scribbling in notebooks, and many cries of joy as Dutchman's breeches, spring beauty, hepatica, bloodroot, trilliums, squirrel corn and a few trout lilies were all discovered blooming where only a week ago snow and dead leaves had lain. All too soon it was time for the others to leave, and I had to pick up Jean from her study plot. I found her lying stiff and cold behind her scope, waiting for a stubborn groundhog.

She packed, and we went off to the lean-to for supper. From there we moved on to the temporary pond above the falls on the escarpment. There the spring peepers were calling loud and clear. We heard only a few chorus frogs, as they call mainly during the day. I changed into shorts, Jean rolled up her pants, and thus attired we both plunged into the murky depths of the frog pond. The air temperature was an uncomfortable 42°F (5.6°C) and the water 52°F (11.1°C), a combination that encouraged you to keep wet once you had got wet. The strong wind made it seem much colder. We were, nevertheless, warm enough so long as we kept in water up to our knees (sort of!). What I would have given for a pair of hip waders!

The frogging was poor, to say the least. Our coordination kept getting worse. I only managed to catch a pitiful three spring peepers. These were marked and measured, then returned to the pond. Temperatures were taken again - air 38°F (3.3°C), water 51°F (10.6°C). We had been in the water an hour, and I was beginning to wonder what our temperatures were. A bit cold for comfort, that's for sure.

We trudged off homewards, and after the first half mile we had stopped shivering and the leadness in our feet had almost disappeared. Snipe laughed overhead and the occasional woodcock soared up in its nuptial flight.

We were just passing pond five when we heard geese calling overhead. We turned and saw a beautiful crimson sunset. The sky had cleared, and only a few clouds were left to frame the glowing orb. We ran down to the shore for a better look, and the honking grew closer still. Just as we reached the edge of the water, we saw a flock of about 20 Canada Geese silhouetted momentarily against the setting sun. They banked to settle on the deep blue of the pond, calling all the while ... and I cursed my empty camera.

# Council Report

Peter Hall

It's business as usual once more as Council resumed its regular meetings in September after a summer recess. For many Council members, however, work had never stopped as preparations continued for the upcoming centennial year.

At the meeting, Council approved the 1979 calendar featuring nature art by Club members that accompanies this issue of T&L. Council extends its thanks to Marc Forget for organizing this project.

A member of Council has now been named as a director of the Federation of Ontario Naturalists. Courtney Gilliatt was elected at the FON annual meeting in Thunder Bay, and will serve until 1982. His presence should help to reinstate a close relationship between the OFNC and the FON.

Council unanimously voted at the September meeting to send a letter to Northern Affairs Minister, Hugh Faulkner, in support of his move to create the first national wilderness park in Canada. The park will be situated in the northern Yukon.

Here at home, the conservation issue also takes top priority. Council discussed the need to put more effort into conservation in the Ottawa area. The Conservation Committee of Council continues to put in long hours, but more support is needed from the membership of the club at large.

In the last Council Report it was mentioned that several prominent members recently resigned. This left vacant two committee chairmanships. Two long-standing club members have since volunteered to fill these positions. Janette Dean is the new chairwoman of the Excursions and Lectures Committee, and Frank Goodspeed will take over the reins of the Membership Committee.

Ellaine Dickson, a long-time member of Council and an accomplished artist, has contributed an owl design to the OFNC for the printing of hasty notes.

Our Sincere Thanks to Dr. Louis Lemieux, Director of the National Museum of Natural Sciences, and to his Secretary, Mrs. Dorothea Freeborn, for their valued assistance to Trail & Landscape staff. We appreciate also the help of Lloyd McDermot and Allan Reddoch who made photographic prints to illustrate our articles.

Editors



---

## Have You Acted Yet ?

OFNC members in Ottawa-Carleton are reminded to support the conservation of significant natural areas by making sure they are included in the Regional Official Plan. Do this by writing to the Chairman or members of the Regional Planning Committee or to the representatives of your municipality on the Regional Council if you have not already done so. When a public hearing is held, make an effort to attend to show your support for presentations made by the OFNC and by other conservation-oriented organizations.

Those of you who have written to your municipal representatives are already generating positive responses. Every letter and phone call counts.

---

## Photographic Workshop-November 1

Here's another chance to get into a working and learning group of photo fans. Come along to the Activity Centre, National Museum of Natural Sciences (Metcalf and MacLeod) at 8 p.m. to hear about macrophotography techniques and see a slide presentation. Learn how you can use your skill for the betterment of humanity (especially naturalists!)

---



## Hey, You Behind the Camera

Wondering what to do with all those fine nature photos you've been taking? Share them with fellow readers of T&L. Next year we'll have a new look - cover photos by Club members, a different one for each issue. We need yours - who's first?

Call Marc Forget, evenings, 232-2773.

---

## Now That You've Seen Our Calendar

you will probably want more for stocking stuffers or whatever. A limited number of extra copies are available at \$1 apiece for you to pick up at Club meetings and outings before Christmas. OR you can get calendars from the following at their homes - please phone first:

EAST	Anne Hanes	18 Briarcliffe Drive	749-2400
CENTRAL	Marc Forget	156 First Ave.	232-2773
WEST	Ellaine Dickson	2037 Honeywell Ave.	722-3050

---

## Index to Volume Twelve

### BIRDS

- Fall Birds 1977, 6
- Birds of November and December 1977, 56
- Birds of January and February 1978, 82
- Birds of March to May 1978, 104
- Birds in June, July and August, 128
- Beginner's Luck, 27
- Birding at Britannia During Migration Times, 66
- Breeding Bird Excursion: Manion Corners, 24
- Bus Excursion to Presqu'ile, 32
- A New OFNC Bird Feeder, 17
- Notes on the Christmas Bird Count, 142
- Ontario Heronry Inventory, 78
- Ruffled by a Ruffed, 81
- A Study of Owl Pellets, 124

### PLANTS

- And How Do You Like Your Plants - Medium Rare?, 34
- Colonel By's Forgotten Forest, 114
- Plant Folklore, 71, 109, 131
- The Brobdingnagian Elm of Pontiac County, 146

### LANDSCAPE

- Bridlewood for Cross-Country Skiing, 9
- Conservation Lands Study I, 46; II, 72; III, 111
- Dow's Swamp, 132
- Looking at Snow Surfaces, 9
- The Long Swamp Near Manion Corners, 19
- The South Gloucester Conservation Area Revisited, 47

### CLUB HISTORY, AFFAIRS

- Centennial Report, 28, 77, 122
- The Club Years 1940-1949, 34
- Council Report, 118, 150
- Excursion Etiquette - A Guide for Participants, 85
- The Leadership Workshop, 16
- "Let Us Now Praise Famous Men", 2
- Memorandum on the Macoun Field Club, 91

### MISCELLANEOUS

- Editorial Policy of Trail & Landscape, 90
- Hunting Restrictions in Ottawa-Hull, Enforcement Agencies, 106
- Macoun What's What, 45, 76, 148
- Spring Thaw, 54
- Your Public Archives, 65

---

# OFNC Late Fall Program

arranged by the Excursions and Lectures Committee  
Janette Dean, Chairman (728-0695)

Tuesday      OFNC MONTHLY MEETING  
14 November   KILLARNEY PROVINCIAL PARK

Speaker:      Betty Marwood (692-4195)  
Meet:          Auditorium, National Museum of Natural  
                 Sciences, Metcalfe and MacLeod.  
Time:          8:00 p.m.

An artist's view of "the crown jewel of Ontario parks",  
capturing with the camera the pleasures of experience  
and atmosphere of Killarney.

Saturday      WINTER TWIG WALK  
18 November

Leader:        Jim Wickware (225-2658)  
Assistant:     David Beddoe  
Meet:          outside Brooke Claxton Building,  
                 Tunney's Pasture, far north end of  
                 Holland Avenue  
Time:          1:30 p.m.

Destination is the Y Camp at Dunrobin for a walk lasting  
about 1½ hours, looking at trees under winter conditions.  
A warm fire and refreshments will be available at the end  
of the excursion.

Tuesday      OFNC MONTHLY MEETING  
12 December   NATURAL HISTORY OF THE COLORADO PLATEAU

Speaker:       George A. Armbrust (226-4137)  
Meet:          Auditorium, National Museum of Natural  
                 Sciences, Metcalfe and MacLeod  
Time:          8:00 p.m.

A slide-illustrated talk showing geologic features and  
plant communities of the southwest U.S. based on many  
field trips through the Grand Canyon, down San Juan River  
to Petrified Forest, Painted Desert, Sunset Volcano  
Crater, Zion Park, Bryce Canyon, Capital Reef Park and  
Arches and Canyonlands Park.

ISSN 0041-0748

TRAIL & LANDSCAPE

published by

THE OTTAWA FIELD-NATURALISTS' CLUB

Second Class Mail - Registration Number 2777  
Postage paid in cash at Ottawa

Change of Address Notices and undeliverable Copies:  
Box 3264 Postal Station C, Ottawa, Ont.

K1Y 4J5

Return postage guaranteed

